

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	TRENDS IN SPECIAL ACCESS PRICING	2
A.	Evidence presented by Verizon on pricing trends	3
B.	Evidence presented by SBC on pricing trends.....	8
C.	Exclusionary pricing discounts	11
III.	THE TRANSPORT IMPAIRMENT TEST PROPOSED BY BELL SOUTH	17
A.	Regression analysis	19
B.	Distribution of number of collocators in the BellSouth database	21
C.	Simulation Results	22
D.	Is One Competitor Enough?.....	23
IV.	EVIDENCE OF PRICING DISTORTIONS IN THE ENTERPRISE CUSTOMER MARKET.....	25
V.	THE DIFFERENTIAL EFFECT OF SPECIAL ACCESS PRICING ON WIRELINE AND WIRELESS MARKETS	27
VI.	CONCLUSION.....	28

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Unbundled Access to Network Elements)	WC Docket No. 04-313
)	
Review of the Section 251 Unbundling)	
Obligations of Incumbent Local Exchange)	CC Docket No. 01-338
Carriers)	

**REPLY DECLARATION OF MICHAEL PELCOVITS AND CHRIS
FRENTROP**

I. INTRODUCTION

1. My name is Michael Pelcovits. I am a principal in the consulting firm MiCRA, Inc. My business address is 1155 Connecticut Avenue, Washington, D.C. 20036. My name is Chris Frentrup, an Economist in the same firm. On behalf of a group of 27 CLECs, we presented a paper (coauthored by Drs. John Mayo and Seth Sacher) to staff of the FCC on October 4, 2004, which was filed as an ex parte contact on October 5, 2004 by The KDW Group LLC.¹

¹ Mayo/MiCRA/Bates White Economic Impairment Analysis, submitted by The KDW Group as an ex parte on October 5, 2004, in WC Docket No. 04-313, CC Docket No. 01-338. The CLEC co-sponsors of that study were: AT&T; Blackfoot Telecommunications Group; Cavalier Telephone, LLC; Cbeyond Communications; Choice One Communications; CompTel/ASCENT; Conversent Communications; Covad Communications; DSL.net, Inc.; Eschelon Telecom, Inc.; FDN Communications; KMC Telecom; ITCDeltaCom; Lightship Telecom; MCI; McLeodUSA; New Edge Networks; NuVox Communications; OneEighty Communications; Pac-West Telecomm, Inc.; PAETEC Communications; Supra Telecommunications and Information Systems, Inc; TDS Metrocom; US LEC Corp.; U.S. TelePacific Corp.; XO Communications; and Xspedius Communications.

2. The purpose of this reply declaration, which is filed on behalf of the same 27 CLECs, is to respond to several points raised in the comments and declarations filed by, and on behalf of, several of the ILEC parties concerning the market for high capacity loops and transport. Specifically, we will address: 1) claims made about the pricing of special access by Dr. William Taylor on behalf of Verizon, and Mr. Parley Casto on behalf of SBC; 2) the impairment test proposed by BellSouth for high capacity transport; 3) statements about the nature of competition in the market for enterprise customers made by Mr. Eric Bruno, on behalf of Verizon; 4) statements made that the substitutability of special access for UNEs in the wireless market proves that the wireline carriers would not be impaired if they too had to rely on special access.²

II. TRENDS IN SPECIAL ACCESS PRICING

3. The ILECs have seized on the *USTA II* Court's discussion of special access as an opportunity to leverage special access into a complete solution of the impairment problem. In the ILECs' view, special access service is provided at very competitive prices and serves as an effective substitute for all high capacity UNEs. In support of their position, the ILECs present several analyses of special access pricing trends purporting to demonstrate that prices have declined substantially since the Commission introduced pricing flexibility in 2001.
4. In this Section, we will discuss the evidence presented on special access pricing by Dr. Taylor for Verizon and Mr. Casto for SBC. We will demonstrate that their

² See, e.g., USTA Comments at 20-21; SBC Comments at 67-68.

methodology is fatally flawed, and even then does not support their conclusions.

In addition, we will respond to Mr. Casto's statements regarding the discount plans introduced in the last several years by SBC. We will demonstrate that rather than being a pro-competitive response to the CLECs, these plans are designed to accomplish anticompetitive goals.

A. *Evidence presented by Verizon on pricing trends*

5. Dr. Taylor, on behalf of Verizon, submitted an analysis of special access pricing trends that purports to demonstrate that the prices for special access services have decreased at a faster rate since the Commission granted the RBOCs pricing flexibility for their special access services beginning in 2001.³ This analysis suffers from methodological flaws that render it useless for making such a demonstration. Even if the analysis could be taken at face value, it would in fact demonstrate that Verizon's special access prices have fallen at a lower rate since it received pricing flexibility.
6. Dr. Taylor computes the prices for special access services using a time series of revenue per voice grade equivalent (VGE) circuit. He extracts special access revenues for each of the RBOCs from line 5083 of ARMIS 43-03 and counts of VGEs from Table III of ARMIS 43-08, line 910. The "price" for special access for each year from 1996 through 2003 is then computed by dividing these revenues by VGEs. He then compares the annual average change in prices over

³ See Declaration of William E. Taylor Regarding Special Access Pricing on Behalf of Verizon, Attachment G to Verizon's Comments, submitted October 4, 2004 in CC Docket No. 04-313.

two time periods – 1996 through 2000, and 2001 through 2003. Since the RBOCs began receiving pricing flexibility for special access services beginning in February, 2001, any change in the trend of prices between those two periods is deemed by Dr. Taylor to be due to competition and the pricing flexibility the RBOCs received.

7. The fundamental flaw in this analysis is that the method that Dr. Taylor uses to compute changes in special access prices does not use a fixed market basket, and thus does not separately identify the effect of changes in prices and changes in the mix of services purchased in the market. Most price indexes in common use, such as the Consumer Price Index used to measure overall inflation in the United States' economy, and the Actual Price Index used in the Commission's price cap plan to measure changes in access prices, use a fixed market basket of goods to compute price changes. Using fixed quantities of demand to compute a price index isolates the effect of price changes.
8. The mistake of using varying demands in each year is made even more problematic by the use of VGEs as the unit of demand. Because DS-3 service has so many more VGEs than DS-1 (one DS-3 is 672 VGEs, while a DS-1 has 24 VGEs), any change in the mix of DS-1s and DS-3s purchased will skew the computed price change. A simple numerical example will illustrate.
9. Assume that there is one customer for special access service, who needs 120 VGEs of capacity. He can purchase this capacity by buying 5 DS-1s (5 DS-1s times 24 VGEs per DS-1 = 120 VGEs) or by buying one DS-3, which will

- provide the customer with the needed 120 VGEs and leave over 552 VGEs of spare capacity. Whether the customer will buy DS-1 or DS-3 service will depend on relative prices. Assume that in year one the price of a DS-1 is \$100 and the price of a DS-3 is \$600. Then, the customer can pay \$500 for DS-1 service (5 DS-1s times \$100 per DS-1) or \$600 for one DS-3. Clearly, he will buy the DS-1 service. Under Verizon's methodology, the price for special access in year one will be \$4.17 per VGE (computed as $\$500 / 120 \text{ VGEs}$).
10. Suppose that in year two the RBOC raises the price of both DS-1 and DS-3 service by \$50 so that one DS-1 costs \$150 and one DS-3 costs \$650. If there is still only this one customer with the same level of demand, he can now buy DS-1 service for \$750 (5 DS-1s times \$150 per DS-1) or DS-3 service for \$650. Clearly, the customer will switch to DS-3 service. Dr. Taylor's measure of prices, however, will compute the effect of this \$50 increase in the price of both DS-1s and DS-3s as a decrease in price, to \$0.97 ($\$650 / 672 \text{ VGEs}$). The unambiguous increase in prices in this example has been transformed by Verizon's methodology into a price decrease.
11. Dr. Taylor's methodology will also give erroneous results to the extent that the typical customer's demand for circuits is growing. The reason is that even with relative prices remaining unchanged, DS-3 circuits will become more attractive than DS-1 circuits, as demand increases. In the example given above, if the customer's demand increases by 25% from one period to the next, then he will substitute one DS-3 for the seven DS-1s that would otherwise be needed. This

would yield to the measurement of a significant decline in Dr. Taylor's price index, even though there was no change in actual prices.

12. Nor is this the only manner in which Verizon's methodology leads to a miscalculation of price changes. Special access services typically have both a fixed and per mile component. To the extent that purchasers of special access find ways to reconfigure their own networks to reduce their mileage charges, for example by placing network nodes closer to the RBOC central offices, they will pay less for a DS-1 or DS-3 circuit. Even with no change in RBOC prices, this reduction in mileage will reduce the RBOC revenue for DS-1 or DS-3, and result in a lower computed price under Verizon's methodology. Clearly then, Verizon's methodology for computing price changes is flawed, given the high likelihood that the mix of services bought for DS-1 and DS-3 special access has changed in all these ways over time.
13. Even in the unlikely event that these two flaws did not distort Verizon's analysis, the "price changes" computed by Verizon do not show the unambiguous increase in price reductions that Verizon claims. Verizon's comparison of the difference in price changes pre- and post-pricing flexibility is highly dependent on its decision to begin its comparison of post-flexibility price changes in 2001, rather than 2000. The RBOCs began to receive pricing flexibility for their special access services in February 2001, so Verizon rightly ends the pre-flexibility period in 2000. However, it does not use prices in 2000 as the base from which to compute price changes post-pricing flexibility, instead using 2001 as the base

year. However, the 2001 prices already include a response to the pricing flexibility the RBOCs receive, so price changes in that year also should be included in the post-pricing flexibility period. Table 1 below presents the price changes computed using Verizon's flawed methodology for the two periods in Verizon's analysis, and for the correct post-pricing flexibility period of 2000 through 2003.

Table 1			
Special Access Revenue Per Line			
Nominal Annual Growth	2000-2003	2001-2003	1996-2000
BellSouth Corporation	3.4%	-4.5%	-15.3%
Qwest Corporation	8.9%	7.0%	16.9%
SBC Communications	-3.9%	-9.4%	2.5%
Verizon Bell Atlantic	-9.2%	-11.7%	-10.6%
Verizon GTE	3.6%	8.0%	-7.6%

14. The rightmost column in Table 1, labeled 1996-2000, shows the annual average change in special access prices between those years (after the passage of the Telecom Act, but before the RBOCs were granted special access pricing flexibility). There was a great deal of apparent variability among the RBOCs, from a 15.3 percent annual average decrease over those years in BellSouth versus a 16.9 percent increase for Qwest. Using prices in 2000, the last year before the RBOCs began to receive pricing flexibility, as the base (reported in the leftmost

- column in Table 1, labeled 2000-2003), price changes have continued to vary widely among the RBOCs. BellSouth and GTE have actually increased prices since 2000, compared to their substantial decreases prior to 2000. Qwest special access prices continue to rise, albeit at a lower rate. Verizon's rates continue to decline, but at a lower rate – only 9.2 percent per year after pricing flexibility versus 10.6 percent before. It was only by ignoring the price changes in 2001 (see the middle column of Table 1) that Verizon was able to report a greater price reduction after than before receiving pricing flexibility.
15. We do not suggest that these computed price changes are in fact representative of actual changes in prices. In fact, the great variability in price changes between the periods reported in Table 1, and the sensitivity of the post-pricing flexibility price changes to the starting point chosen, suggests that the price changes computed using Verizon's methodology are capturing more than just price changes, instead reflecting to some extent the changes in the mix of services purchased, as discussed above. However, if Verizon is correct on the computation of price changes, it is clear that the RBOCs have not in general responded to the pricing flexibility they have received by accelerating decreases in the prices for special access services.

B. Evidence presented by SBC on pricing trends

16. SBC contends that it faces substantial competition in the provision of special access services, and that this prevents it from exercising any market power to

- raise its rates.⁴ In fact, SBC claims, its special access rates have declined over the past several years. According to SBC, the competitively set prices for its special access services allow the CLECs to compete for end user customers against SBC.
17. These claims are overblown. SBC's prices have not declined at a greater rate due to the competition that SBC claims it faces. Even if SBC has computed its special access price changes correctly, the reductions it claims are merely consistent with the cost changes that should have occurred given expected productivity increases. In addition, SBC's prices for DS-1 circuits are actually higher in the Metropolitan Statistical Areas (MSAs) in which the Commission has granted it pricing flexibility. Clearly, the alleged competition in these MSAs is not serving to restrict SBC's prices for special access, and any reliance on SBC's special access services by the CLECs would expose them to the risk of price squeezes and exclusionary pricing.
18. SBC claims that its average DS-1 prices have fallen by 11 percent overall from 2001 to 2004, and by 14 percent once the additional discounts for its Managed Value Plan (MVP) are included.⁵ It appears to have computed these price changes by computing the average revenue per circuit in each of those years. The methodology used to compute the average circuit price is not specified, but if SBC used the same methodology used by Verizon, its estimate of price changes would be misstated because it would combine the effects of volume changes and

⁴ See Declaration of Parley C. Casto on Behalf of SBC Communications Inc., submitted as Attachment D to SBC's Comments in this proceeding.

⁵ See Casto Declaration at ¶14-15.

price changes. Even if the price change had been computed correctly, the amount of the change is approximately the same the increase in productivity required in the Commission's price cap formula,⁶ and therefore does not signify any increase in competitive pressure in the special access market.

19. SBC does not include in its computation of price changes the effect of the prices it charges in the MSAs in which it has received pricing flexibility, implying that their inclusion would result in an even greater decrease in DS-1 rates.⁷ Table II below shows the current prices for month-to-month and 3- and 5-year term plans for DS-1 Channel Terminations and Channel Mileage, in the MSAs in which SBC has been granted pricing flexibility and for the basic rates in areas where it has not been granted such flexibility. As can be seen from that table, these rates are actually higher in areas where SBC has been given flexibility.⁸ The difference is perhaps most pronounced for the Channel Mileage rates, which range from 25 percent to just over 40 percent higher in pricing flexibility areas. If these higher rates were included in SBC's computations of price changes, the computed percentage price reductions would be lower, not higher, as SBC claims.

⁶ The change in the inflation index used in the Commission's price cap plan was 2.4 percent, 1.6 percent, and 1.7 percent in 2002, 2003, and 2004, respectively, while the productivity factor in each year was 6.5 percent. Taken together, these imply a reduction in costs and thus of prices of 13.2 percent.

⁷ See Casto Declaration at ¶15.

⁸ This is also consistent with pricing behavior by BellSouth as well, who raised its month-to-month prices in areas where it received pricing flexibility.

TABLE II - Comparison of SBC Special Access Tariffs in Price Flex and Basic Areas

	Basic Rates			MSAs with Pricing Flexibility			Percent Increase over Basic		
	Month to Month	3 Year Term	5 Year Term	Month to Month	3 Year Term	5 Year Term	Month to Month	3 Year Term	5 Year Term
Channel Termination									
Zone 1	181.00	112.00	90.00	215.00	115.00	100.00	18.8%	2.7%	11.1%
Zone 2	183.00	116.00	95.00	225.00	120.00	110.00	23.0%	3.4%	15.8%
Zone 3	185.00	125.00	102.90	240.00	130.00	120.00	29.7%	4.0%	16.6%
Channel Mileage									
Fixed									
Zone 1	60.00	39.00	34.00	75.00	50.00	47.50	25.0%	28.2%	39.7%
Zone 2	60.00	39.00	34.00	80.00	50.00	47.50	33.3%	28.2%	39.7%
Zone 3	60.00	39.00	34.00	85.00	50.00	47.50	41.7%	28.2%	39.7%
Per Mile									
Zone 1	15.50	12.25	8.85	16.00	16.80	15.96	3.2%	37.1%	80.3%
Zone 2	15.50	12.25	8.85	17.00	16.80	15.96	9.7%	37.1%	80.3%
Zone 3	15.50	12.25	8.85	18.00	16.80	15.96	16.1%	37.1%	80.3%
Price of a 10 mile circuit									
Zone 1	396.00	273.50	212.50	450.00	333.00	307.10	13.6%	21.8%	44.5%
Zone 2	398.00	277.50	217.50	470.00	338.00	317.10	18.1%	21.8%	45.8%
Zone 3	400.00	286.50	225.40	495.00	348.00	327.10	23.8%	21.5%	45.1%

C. Exclusionary pricing discounts

20. SBC acknowledges the importance of special access prices to the CLECs, noting that 90 percent of its DS-1 revenues come from wholesale customers.⁹ SBC also notes that approximately two thirds of its special access revenue is purchased under its MVP rates.¹⁰ This is especially important because the MVP, as discussed below, is a prime vehicle for exclusionary pricing. The effect of such exclusionary pricing is to foreclose competitive entry into the access business and permit incumbent LECs to charge supra-competitive rates for special access services.

21. Companies often provide services to customers under exclusive arrangements that restrict the ability of those customers to obtain services from the sellers'

⁹ See Casto Declaration at ¶6.

¹⁰ Id. at ¶8.

- competitors. These exclusive arrangements “lock up” the demand of the purchaser for the supplier’s services and prohibit the customer from looking elsewhere for those services. In competitive markets with multiple suppliers, such exclusive arrangements generally do not result in competitive harm. In markets dominated by a single supplier, however, exclusive arrangements raise the cost of the supplier’s competitors to provide competitive services and increase the dominant supplier’s power over the price of those services.¹¹
22. Dominant firms use pricing schemes to induce purchasers to enter into exclusive arrangements. As a general matter, exclusionary pricing is a more rational anti-competitive strategy than predatory pricing because exclusionary pricing does not require the company with market power to set prices below its own costs. Exclusionary pricing therefore can be virtually costless to the dominant company as its price structure can be adjusted so that revenues lost in one product are made up by higher prices in another product.
23. Exclusive arrangements by dominant firms can “lock up” demand for services, leaving nothing for competitors. In a market where a competitor must obtain a substantial share of the existing market to achieve economies of scale, a company with market power need deter only a small fraction of its customers from switching providers to convince a potential rival not to enter the market. This presents a dominant firm with the incentive to induce enough buyers to sign

¹¹ Exclusive dealing arrangements, such as those described in this section are only one form of exclusionary practices that can be engaged in by dominant firms. *See generally Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power over Price*, T. Krattenmaker & S. Salop, 96 Yale L.J. 209.

exclusive contracts, such that there is insufficient demand available to other firms to enable them to remain in or enter the market and operate profitably.

24. Less than fully exclusive contracts can also be exclusionary if they tie up sufficient volume to prevent smaller competitors from achieving minimum viable scale. When a customer is unwilling or unable to deal with a competitive entrant for the customer's entire demand, the dominant firm can leverage its market power over the customers' basic demand to raise substantially the costs of dealing with the competitor. Thus, the key to successful exclusionary pricing is to condition the pricing of the non-competitive portion of the customer's demand on the choices the customer makes for the competitively sensitive portion of its demand. The result of that strategy is that the customer pays a higher price on the non-competitive services if it deals with a competitor for the competitively sensitive services.

25. By contrast, exclusive arrangements in competitive markets do not raise competitive concerns because customers can choose between different suppliers to satisfy their demand. Exclusionary or anti-competitive possibilities only arise when one firm, the incumbent monopolist, can supply each customer's entire demand. In that situation, the dominant company can use exclusive arrangements to preclude incremental competitive entry.¹²

¹² See *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, T. Krattenmaker & S. Salop, 96 Yale L.J. 209. "[C]ontracts for exclusionary rights can have the effect of raising rivals' costs by restraining the supply of inputs available to

26. Incumbent LECs have engaged in exclusionary pricing strategies such as those described above, in their provision of special access. For example, SBC's MVP provides discounts that rise from 9 percent to 14 percent over the 5-year term of the plan on all special access service that is purchased from SBC. Any CLEC that wished to capture some incremental traffic would have to provide a discount sufficiently large to make up for the discount lost on the great bulk of the traffic remaining with SBC. Table III below details the minimum discounts that a CLEC would need to offer off of SBC rates to induce a customer to shift 20 percent of its traffic in each of the 5 years of SBC's MVP plan.¹³

Table III. Discount Required to Compete with MVP

	Year 1	Year 2	Year 3	Year 4	Year 5
SBC MVP discount	9%	11%	12%	13%	14%
Required CLEC discount at 20% share	45%	55%	60%	65%	70%

27. If a CLEC were to capture 20 percent of the traffic from a customer, then that customer could fail to meet its traffic obligation to SBC to receive the MVP discount. The CLEC would have to give a discount large enough to make up for the lost discount, i.e., it would have to give a discount of 45 percent from SBC's price in year one of the MVP to keep the customer whole. A CLEC who could

rivals, thereby giving the purchaser power to raise prices in its output market.” *Id.* at 224.

¹³ In fact, the CLEC would likely need to provide even further discounts to reimburse the customer for any penalties it would face for not meeting its revenue commitments.

provide service for a cost only 40 percent below SBC's cost would thus be unable to break even, and thus would be effectively precluded from the market, even though he was the lower cost producer.

28. As mentioned previously, exclusionary agreements are not *per se* anti-competitive. However, under certain market conditions, such as those present in the special access business, exclusive pricing schemes are anti-competitive. For example, in *LePage's Inc. v. 3M*, 324 F.3d 141 (3rd Cir. 2003), the Court of Appeals affirmed the judgment of the district court that 3M's exclusionary conduct could sustain a verdict that 3M violated U.S. antitrust law. In *LePage's*, 3M used its dominant market power in the transparent tape market to meet the competition that LePage's threatened by "exclusionary conduct that consisted of rebate programs and exclusive dealing arrangements designed to drive LePage's and any other viable competitor from the transparent tape market."¹⁴ To effectuate its plan, 3M used rebates to induce LePage's major customers to reduce their purchases from LePage's. 3M then used the penalty payments under those agreements to keep LePage's customers in check.
29. The Third Circuit found that the principal anti-competitive effect of bundled rebates as offered by 3M were that "when offered by a monopolist they may foreclose portions of the market to a potential competitor who does not manufacture an equally diverse group of products and who therefore cannot make

¹⁴ *LePage's*, 324 F.3d at 154.

- a comparable offer.”¹⁵ The court further noted that “[d]iscounts conditioned on exclusivity are ‘problematic’ when the [supplier] is a dominant firm in a position to force manufacturers to make an all-or-nothing choice.”¹⁶ The court also concluded that 3M could effectuate its plan because there was no ease of entry.
30. Ultimately, the court held that “[w]hen a monopolist’s actions are designed to prevent one or more new or potential competitors from gaining a foothold in the market by exclusionary ... conduct, its success in that goal is not only injurious to the potential competitor but also to competition in general.”¹⁷ The monopolist practices of 3M and the incumbent LECs coupled with the market conditions in *LePage’s* and the special access business are highly instructive.
31. Like 3M, the incumbent LECs are dominant providers of their services. Like 3M, the incumbents use exclusionary arrangements to deter and eliminate competitive entry into those markets. Like 3M, the incumbents use penalty provisions to keep their customers from using competitive sources of supply. And like 3M, the incumbents provide services in markets that lack ease of entry. The natural, and unavoidable, result is that the incumbents, like 3M, have unjustifiably harmed the market for special access services.

¹⁵ Id. at 155.

¹⁶ Id. at 158 (citations omitted).

¹⁷ Id. at 159.

32. Through practices such as those described above, SBC and other incumbent LECs present competitive carriers with a Hobson's choice. The carrier must either enter into a service arrangement with the incumbent LEC that restricts the competitive carrier's ability to migrate some of its traffic to lower-priced alternatives, or the competitive carrier must purchase special access services at non-discounted price levels that would make it impossible for the carrier to offer its downstream services at competitively attractive levels. The net effect is that competitive carriers must purchase services from the incumbent LEC because competitive carriers depend on the "discounts" in order to provide their own services at competitive rates.¹⁸ Thus, SBC's pricing plan constrains the development of competitive facilities-based transport services by restricting competitive carriers' ability to use alternate facilities.

III. THE TRANSPORT IMPAIRMENT TEST PROPOSED BY BELL SOUTH

33. BellSouth proposes that "the Commission should find that CLECs are not impaired without access to unbundled high-capacity transport from any central office with 5,000 or more business lines."¹⁹ Their rationale for this test is several-fold. First and foremost, they claim that it is possible to draw a bright-line test based on a significant correlation between the number of fiber collocators and the size of a central office (as measured by the number of business lines). Second,

¹⁸ Because carrier customers of special access services compete with each other for retail customers, none of them can afford to forego the discounts offered by the BOCs for fear of being priced out of the market for the downstream services that depend on special access. Thus, if one carrier opts for the discount plan, all other competitors must follow suit or risk being driven out of the market.

¹⁹ Affidavit of Shelley W. Padgett, ¶13.

BellSouth advocates that this bright line should be drawn at 5,000 business lines, because there is “compelling evidence” that competitors are providing competitive transport in these offices. Third, they argue that impairment for interoffice transport should be defined on a central office basis, rather than a route-by-route basis for dedicated connections between two central offices.

34. We have analyzed the data underlying BellSouth’s claims and found that they do not support their position. The correlation between the size of the central offices and the number of fiber-based collocations is much too weak to support a bright-line test for impairment purposes. Although it may be possible to use central office size as a first step in conducting an impairment analysis, the relationship between size and competition is too weak to rely on central office size as the only factor for determining whether impairment exists. Moreover, the data demonstrate that the 5,000 business line cut-off is not even a useful starting point for conducting an impairment test, because far too many of these offices show little or no evidence of a competitive CLEC presence.²⁰

35. The database provided by BellSouth identifies the 429 central offices with 5,000 or more business lines, and gives the number of business lines, the number of fiber-based collocations, special access revenues, and special access circuits in each office. We analyzed this data from several standpoints. First, we examined

²⁰ This absence of competitive presence for transport suggests that the CLECs would also be unable to overcome the additional cost impediments to providing competitive loops, despite BellSouth’s proposal to use the same business line threshold for finding non-impairment for high capacity loops. See Mayo/MiCRA/Bates White Economic Impairment Analysis at ¶76.

the correlation between the size of the central office and the number of fiber collocations. Second, we determined the actual number and percentage of total central offices in the BellSouth database with a particular count of fiber-based collocations. Third, we estimated the probability that the same CLEC will be collocated at each end of a randomly selected route between two central offices in the same LATA.

A. Regression analysis

36. In order to test BellSouth's assertion that the size of a central office and the number of fiber-based collocators are highly correlated, we performed a simple linear regression of the number of collocators on different measures of the size of the central office. The results of two regressions are report below.

Equation 1

$$\text{Collocators} = -0.06025516 + 0.0002351 * \text{Total Bus Lines}$$

(-3.628) (24.854) (t-values)

$$\text{R-Square} = 0.5913 \quad F = 617.700 \quad N = 429$$

Equation 2

$$\text{Collocators} = -0.0858617 + 0.0001333 * \text{Total Bus Lines} +$$

(-0.477) (7.774)

$$0.0000001 * \text{SpAc Revenue} - 0.0000018 * \text{End User SpAc Rev} +$$

(1.900) (-3.908)

$$0.0076199 * \text{End User SpAc Circuits}$$

(5.845)

$$\text{R-Square} = 0.6473 \quad F = 194.498 \quad N = 429$$

The first regression, which estimates the number of fiber-based collocators based on the number of business lines in the central office, tests directly whether this

measure of CO size does a good job of distinguishing which offices have collocators and which do not. The result, as shown in equation (1), shows that the number of business lines explains about 59% of the variation in the number of fiber-based collocators across all 429 central offices. Thus, the number of business lines in a central office fails to explain over 40% of the variance in the number of collocators. This implies that the number of business lines in a central office may be a useful filter for narrowing the Commission's analysis of impairment, but that it is deficient as the only indicator of the potential for competition.

37. The second regression, reported in equation (2), adds the other measures of market size provided by BellSouth (special access revenues and lines) to the explanatory variables in the equation. Even with these additional variables, however, the overall predictive power of the equation does not increase very much. This regression explains about 65% of the variance in the number of fiber-based collocators, compared to the 59% explained by the simpler, bivariate regression.
38. Together these regressions demonstrate that there must be other significant factors influencing the decision by CLECs whether to build out to a particular central office.²¹ We have not been able to identify or measure these factors in the time available. Nevertheless, the results of our analysis do provide compelling proof

²¹ For example, the CLECs may be constrained by the absence of available conduit or poles and the presence of discriminatory municipal franchise agreements. See Declaration of Brad A. Evans on behalf of Cavalier Telephone, LLC, submitted as Appendix I of ALTS et al Comments, on October 4, 2004, at ¶28-34.

that use of business lines as a proxy for fiber collocators, or as measure of impairment, would lead to a large number of false positive findings of non-impairment.

B. Distribution of number of collocators in the BellSouth database

39. Even to the extent that the size of a central office is correlated with the number of fiber collocators, the data show that the 5,000-business line cutoff is far too aggressive to be used at any stage of an impairment test for high capacity transport. Table IV below shows the number of central offices in the BellSouth database with zero, one, two, three, or more fiber-based collocations. Over one-quarter of those offices have no collocators and almost one-half have only one collocator. With so many central offices having few or no fiber-based collocators, there is a very high probability that there will be a very limited prospect for competition, if any, along any route connecting two of these central offices.

Table IV: BellSouth central offices with more than 5000 business lines					
Number of Fiber-Based Collocators					
	0	1	2	3	4+
Number of Central Offices	122	91	50	44	122
Percentage of Central Offices	28%	21%	12%	10%	28%

40. This goes to the heart of the dispute between the ILECs and the CLECs on the proper definition of the market. The presence of a fiber-based collocater at a particular central office says nothing about actual or potential competition along a particular route, connecting this central office to another. If the CLECs with a fiber collocation at Central Office A are different from the CLECs with a fiber based collocation at Central Office B, then wholesale competition for dedicated transport on this route will not emerge unless conditions change dramatically to encourage new fiber builds. Therefore, BellSouth's claim that impairment no longer exists in central offices with more than 5,000 lines relies on a series of "maybes" that must all be a reality for competitive alternatives to actually exist.

C. Simulation Results

41. We have attempted to test the hypothesis that competitive transport exists between any two central offices, out of the set of 429 central offices in the BellSouth database. Because the data did not identify the actual collocaters in each office, we needed to make certain assumptions about the total number and distribution of CLECs across the 429 central offices. First, we assumed a total of 22 CLECs in the BellSouth area.²² We also assumed these 22 CLECs were uniformly distributed across the central offices. We then simulated random drawings of central office pairs in each BellSouth LATA to test the hypothesis of whether there was one or more CLECs collocated at both ends of the route. The result of the simulation was that there was a 56% probability of finding no CLEC

²² This is the maximum number of total fiber collocaters in any one of the 429 central offices. Certainly there are more than 22 CLECs, because not all of the CLECs in the region will be in the same CO. Therefore, this is a very conservative assumption.

serving both ends of the route, a 23% probability of finding one CLEC at both ends of the route, an 8% probability of finding two CLECs at both ends of the route, and only a 13% chance of finding three or more CLECs at both ends of the route. This provides very powerful evidence that the impairment test proposed by BellSouth would fail miserably at predicting the presence of possible facilities-based competitors along a route.

D. Is One Competitor Enough?

42. Finally, we would like to respond to the point made by Shelley Padgett on behalf of BellSouth that “the presence of even one-fiber based collocation or fiber optic network is evidence that carriers can enter and have entered the market.”²³ There are three fallacies in this statement. First, it misdiagnoses the issue by failing to define the market properly. As discussed above, the presence of a fiber-based collocater at a particular central office says nothing about actual or potential competition along a particular route. Any CLEC will remain entirely dependent on the ILEC for dedicated transport to backhaul its customers’ circuit, unless there is a wholesale competitor with facilities in place to connect these circuits to the customer-CLEC’s point of presence.²⁴ Second, it sidesteps the importance of having more than two carriers (the ILEC plus the fiber-based CLEC) to yield

²³ Padgett Affidavit, ¶6.

²⁴ The collocation triggers have proven to be a poor indicator of competitive forces. See G. S. Ford and L. J. Spiwak, *Set It and Forget It? Market Power and the Consequences of Premature Deregulation in Telecommunications Markets*, Phoenix Center Policy Paper No. 18 (July 2003) (available at www.phoenix-center.org). There are also several practical problems with using a fiber based collocater to replace UNEs, such as their inability to support collocation arrangements, lack of capacity, non-ubiquitous routing, and restriction to offering only lit fiber. See Evans Declaration at ¶35-40.

competitive conditions in the market for wholesale high capacity transport services. Third, when entry requires sunk costs (as collocation does), then the entry of one firm says absolutely nothing about the ability of additional firms to enter.²⁵ With sunk costs, there is an equilibrium number of firms that can profitably serve a market, and when that equilibrium is reached, additional entry is precluded. Without knowledge of how many firms can be sustained in equilibrium, past entry provides no information on the prospects for future entry.

43. An analogous assertion was made by some ILECs that because carriers that deploy loop or transport facilities will always deploy lots of spare capacity, even a single competitor is sufficient to establish a competitive market.²⁶ This argument assumes that carriers will build capacity in anticipation of future demand, but will then aggressively compete prices down to marginal cost. This may happen, in the aftermath of a period where CLECs overbuilt capacity in anticipation of demand, which never materialized. Now, however, carriers are not building new capacity, unless they have already secured a long-term contract from a large customer. The last thing a carrier wants to do is to sell capacity under long-term contracts at a loss. And once a CLEC has built this capacity, it is highly unlikely to undercut its own long-term contract price by offering wholesale capacity at steep discounts. In addition, the CLEC would face non-trivial costs to begin providing wholesale

²⁵ See, e.g., Access Charge Reform, CC Docket No. 96-262, Fifth Report and Order, 14 FCC Rcd 14221 (1999), at 94 ("we conclude that it is appropriate to give incumbent LECs pricing flexibility when competitors have made irreversible, sunk investment in facilities"); and John Sutton, Sunk Costs and Market Structure (1991).

²⁶ See, e.g., UNE Fact Report 2004, submitted by BellSouth, SBC, Qwest, and Verizon, on October 4, 2004 in WC Docket No. 04-313, CC Docket No. 01-338, at III-26.

service, including at a minimum the operation support systems to allow its wholesale customers to place orders in an efficient manner.

IV. EVIDENCE OF PRICING DISTORTIONS IN THE ENTERPRISE CUSTOMER MARKET

44. In the report we co-authored with Drs. Mayo and Sacher, we raised the concern that the ILECs would use their control over special access pricing to obtain an unfair and artificial advantage over their rivals in the interLATA market, especially with respect to enterprise customers.²⁷
45. Verizon, in the declaration of Eric Bruno, attempts to refute this argument, claiming instead that Verizon has had only limited success at competing for enterprise customers' business, and that rather than engaging in a price squeeze, Verizon has at times been unable to meet the other carriers' prices.²⁸
46. Verizon has completely missed the main thrust of our argument about the ILECs' incentive and ability to engage in anticompetitive price squeezes so long as its competitors must rely on overpriced special access. As we stated in our previous report, "one of the greatest dangers associated with eliminating UNEs is that it opens the door to the ILECs to engage in strategic behavior that would *stymie new facilities builds* by the CLECs."²⁹ In other words, the impact of a price squeeze is likely to be very different in the short-run and the long-run. In the short-run,

²⁷ Mayo/MiCRA/Bates White Economic Impairment Analysis, ¶115.

²⁸ Declaration of Eric J. Bruno, ¶22.

²⁹ Mayo/MiCRA/Bates White, ¶111 (emphasis added).

although the ILECs may lower retail prices well below the CLECs' average cost, the CLECs will be likely to respond by cutting their own prices. The reason is that at least in the short run, the CLECs' marginal costs will be very low, because so much of their total costs are already sunk. Rather than lose their entire customer base, the CLECs will cut prices to match the ILEC in order to earn a positive margin in the short run. By contrast, in the long run, the CLECs will be deterred from making new investments in sunk facilities, because they will observe the lower, unrecovered, cost threshold of the ILECs (i.e., "first mover" advantages) and then recognize that they face enormous risks of not recovering the cost of these new investments.

47. There are many other reasons to be skeptical about any early "election returns" on which carriers are now winning contracts from large customers. Many CLECs have developed significant expertise in providing the specialized services required by these customers. It will take some time for Verizon and other large ILECs to match these capabilities. However, the ILECs do not face any insurmountable barriers with respect to building up these capabilities, and as they do, they will be well positioned to leverage their monopoly over high capacity loops and transport and gain an unfair advantage over their competitors.
48. Finally, it is worth pointing out that the evidence presented by Mr. Bruno, does not comport with his story that Verizon, saddled by "regulatory impediments," has achieved only limited success.³⁰ Mr. Bruno reports that of the 203 RFPs for

³⁰ Bruno Declaration, ¶16.

new contracts with large enterprise customers, Verizon has won contracts “for only” 68 of them. Rather than showing a hobbled Verizon, this success rate of 33% would be the envy of any “new entrant” into a specialized market with large and sophisticated customers. Even if Verizon has not yet begun wring out its competitors’ margins with a full-fledged price squeeze, this portends an enormous risk to competition should Verizon succeed in convincing the Commission to kill off UNEs.

V. THE DIFFERENTIAL EFFECT OF SPECIAL ACCESS PRICING ON WIRELINE AND WIRELESS MARKETS

49. In our earlier report, we explained why reliance on above-cost special access rates would impair CLECs in the wireline market, even though wireless carriers may not now be impaired by the requirement that they use special access.³¹ Among the differences characterizing the two markets are: the dynamic growth of the wireless market and the difference in the share of costs represented by special access (or UNEs) for the wireless and wireline industry.

50. In response to the ILECs’ continued discussion of the “special access paradox,”³² we have extended the analysis of our earlier joint study with Drs. Mayo and Sacher by quantifying the difference in importance of UNEs to wireline and wireless carriers. In the attached study, Dr. George Ford and Dr. Pelcovits have estimated the impact on wireline and wireless carriers of a change in the price of dedicated circuits purchased from the ILECs. The change in price used in our

³¹ Mayo/MiCRA/Bates White Economic Impairment Analysis, ¶107.

³² See, e.g., USTA Comments at 20-21; SBC Comments at 67-68.

model represents the difference between paying UNE rates and special access rates for DS-1 circuits, which is approximately a 100% price increase. The model estimates that this increase in price would reduce CLEC output in the wireline industry by 80%. By contrast, the same price increase would only reduce output in the wireless industry by 3.7%.

51. If it is to have any meaning, the impairment standard must reflect the ability of a firm to provide service and contribute a competitive outcome in downstream markets. If the purchase of higher price retail alternatives (e.g. special access) rather than UNEs has little effect on output, then it may be sensible to find that impairment does not exist. However, if output is strongly affected by input price differences, then the retail services, such as special access, cannot be considered as obviating impairment. Clearly, by any measure or standard, the elimination of UNEs for dedicated loops and transport would have a staggering impact on the CLECs, which stands in marked contrast to the wireless industry where competition, albeit somewhat distorted, has managed to thrive.

VI. CONCLUSION

52. We have demonstrated that the ILECs' claims regarding the changes in their special access prices are erroneous. Specifically, ILEC claims that competition has compelled them to lower their special access rates are false, and the Commission cannot rely on market forces in the future to restrain the ILECs' ability to take anti-competitive actions against CLECs. The ILECs will have the

incentive and ability to use the pricing flexibility they have for their special access services to engage in price squeezes and exclusionary pricing against the CLECs.

53. In addition, BellSouth's claim that CLECs are not impaired in any office with more than 5,000 business lines is shown to be wrong. The mere presence of multiple collocators in office pairs does not guarantee that any one or more collocator has the facilities in place that could potentially connect those two offices. In fact, the probability that two or more CLECs actually have fiber optic facilities collocated in two specific offices is very low. The Commission cannot simply rely on the presence of multiple collocators to assume that offices can be connected; it must first determine that the CLECs do in fact connect those offices, and that they can provide effective competition for the ILEC.
54. Finally, we further quantify the differential impact on wireless and wireline carriers of being forced to use special access rather than UNEs. Because of the amount of transport purchased as an input by wireless and wireline carriers relative to the total cost of producing output in the two markets, wireline carriers, if forced to use special access, would be overwhelmingly disadvantaged and unable to compete against the ILECs in a similar manner as the wireless carriers have in their market.